

## CLAIMS

What we claim as our invention is:

1. A bicycle trainer for use with a conventional bicycle with the front wheel removed comprising:
  - (a) a pivot frame having substantially rigid contiguous parts including; a substantially vertical front member for detachably supporting the front forks of said bicycle; a substantially vertical rear u-shaped member for detachably supporting the rear axle of said bicycle, an interposed horizontal member for supporting said front member and said rear member, and further including a tail member substantially in line with said horizontal member;
  - (b) a base frame having front and rear rotational coupling means for pivotably supporting said horizontal member of said pivot frame;
  - (c) a resistance device attached at the end of said tail member of said pivot frame and frictionally coupled to the rear tire of said bicycle;
  - (d) a spring mechanism contiguous to both said pivot frame and said base frame for pivotably restoring said frame and said bicycle to a substantially vertical neutral position after being pivotably displaced;whereby a person may simulate bicycle sprinting and hill climbing by pivoting the bicycle during use.
2. The bicycle trainer of claim 1 wherein said vertical front member of said pivot frame includes a rotational coupling at the front fork mount to allow for simulated bicycle steering.

3. The bicycle trainer of claim 1 wherein said pivot frame and said base frame are further pivotably connected by a shock absorber.
4. The bicycle trainer of claim 1 wherein said horizontal member of said pivot frame is a cylindrical member.
5. The bicycle trainer of claim 1 wherein said front and rear rotational couplings are bearings.
6. The bicycle trainer of claim 1 wherein said resistance device is a fluid resistance device, a magnetic resistance device, or an air resistance device.
7. A bicycle trainer to be used by a person for use with a conventional bicycle with the front wheel removed comprising:
  - (a) a pivot frame having substantially rigid contiguous parts including; a substantially vertical front member for detachably supporting the front forks of said bicycle; a substantially vertical rear u-shaped member for detachably supporting the rear axle of said bicycle, an interposed cylindrical horizontal member for supporting said front member and said rear member, and further including a tail member extending at the rear of said pivot frame and substantially in line with said cylindrical horizontal member;

- (b) a base rectangular frame having front and rear rotational coupling means for pivotably supporting at said cylindrical horizontal member at opposite ends;
  - (c) a resistance device attached at the end of said tail member of said pivot frame and frictionally coupled to the rear tire of said bicycle;
  - (d) a spring mechanism and a shock absorber contiguous to both said pivot frame and said base frame for pivotably restoring said frame and said bicycle to a substantially vertical neutral position after being pivotably displaced; whereby a person may simulate bicycle sprinting, hill climbing, and pedaling while standing on the pedals with no seat contact by pivoting the bicycle about the imaginary tire contact line during use.
8. The bicycle trainer of claim 7 wherein said u-shaped vertical member of the pivot frame includes a screw-clamping device to support the rear axle.
9. The bicycle trainer of claim 7 wherein said vertical front member of said pivot frame includes a rotational coupling at the front fork mount.